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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,058	03/16/2001	Jonathan C. Kagle	03797.00023	4681
28319	7590	04/06/2004	EXAMINER	
BANNER & WITCOFF LTD., ATTORNEYS FOR MICROSOFT 1001 G STREET, N.W. ELEVENTH STREET WASHINGTON, DC 20001-4597			SCHLAIFER, JONATHAN D	
		ART UNIT		PAPER NUMBER
		2178		
DATE MAILED: 04/06/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/809,058	KAGLE ET AL. <i>SL</i>
	Examiner	Art Unit
	Jonathan D. Schlaifer	2178

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 16 March 2001.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-31 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 1-31 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6.
4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
5) Notice of Informal Patent Application (PTO-152)
6) Other: ____.

DETAILED ACTION

1. This action is responsive to application 09/809,058 filed on 3/16/2001, with prior art filed on 8/16/2001.
2. Claims 1-31 are pending in the case. Claims 1, 7, 10, 14, 16, 22, 25, 29, and 31 are independent claims.

Specification

3. The disclosure is objected to because of the following informalities: On line 5 of page 29 (the Abstract) the last word should be “objects”, not “object”. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-6, 16-21 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Sweeney et al. (USPN 5,966,715—filing date 12/29/1995), hereinafter Sweeney.**
5. **Regarding independent claim 1, Sweeney discloses a method for synchronizing multiple versions of an object (Abstract, lines 4-5, Sweeney uses a DAG to access stored procedures in a version control setup), comprising: receiving a first object (this goes under col. 5, line 19, “Add a new user.”); assigning the first object a unique identifier (this would be inherent to modifying the user’s data, col. 5, lines 24-27); and creating a history graph for the first object having a node representing the unique identifier of the**

first object (col. 5, lines 13-15, the user management system uses a directed acyclic graph mechanism).

6. **Regarding dependent claim 2**, Sweeney discloses adding metadata for the object to describe the object (in col. 5, lines 24-27, the users have associated data).
7. **Regarding dependent claim 3**, Sweeney discloses receiving a second object (this goes under col. 5, line 19, "Add a new user."); determining whether the second object has an associated unique identifier (this would be inherent to modifying the user's data, col. 5, lines 24-27); updating the history graph to include the associated unique identifier of the second object (this would be inherent to the operation of the acyclic graphic mechanism, col. 5, lines 12-15); wherein the history graph includes vectors describing the relationship between the first and second objects associated with the unique identifiers of the nodes in the history graph respectively (the DAG must have vector capabilities because the edges would provide one form of relationship between the objects, namely the relative position within the DAG).
8. **Regarding dependent claim 4**, Sweeney discloses adding metadata to at least one of the first object and the second object, wherein the metadata describes the at least one of the first and second objects and any modifications made to the at least one of the first and second objects (in col. 5, lines 24-27, the users have metadata associated with them).
9. **Regarding dependent claim 5**, Sweeney discloses tracking the history of the first object via the history graph and the metadata associated with the first object (in col. 6, lines 45-65, the patent discloses how the DAG is used to track the history of the user object).

10. **Regarding dependent claim 6**, Sweeney discloses a method further comprising: storing the metadata and the history graph information for each of the first and second objects in a central storage location (in col. 5, lines 5-10, the patent reveals storage of the information using at least one server and at least one database); and accessing the metadata and the history graph information for each of the first and second object via corresponding ones of the unique identifiers (in col. 5, lines 24-27, the objects have identifying information which is presumably used to access them).
11. **Regarding independent claim 16**, it is a computer-readable medium containing instructions for performing the steps of claim 1 and is rejected under similar rationale.
12. **Regarding dependent claim 17**, it is a computer-readable medium containing instructions for performing the steps of claim 2 and is rejected under similar rationale.
13. **Regarding dependent claim 18**, it is a computer-readable medium containing instructions for performing the steps of claim 3 and is rejected under similar rationale.
14. **Regarding dependent claim 19**, it is a computer-readable medium containing instructions for performing the steps of claim 4 and is rejected under similar rationale.
15. **Regarding dependent claim 20**, it is a computer-readable medium containing instructions for performing the steps of claim 5 and is rejected under similar rationale.
16. **Regarding dependent claim 21**, it is a computer-readable medium containing instructions for performing the steps of claim 6 and is rejected under similar rationale.
17. **Regarding independent claim 31**, Sweeney discloses a computer-readable medium having stored thereon a data structure (such a data structure would be inherent to the operation of a database as disclosed in col. 5, lines 5-15), comprising: a) a first data field

containing data representing a unique identifier for an object (this would have to be associated with the metadata, col. 5, lines 24-27, in order to manipulate the object), b) a second data field associated with said first data field by describing the object corresponding to the unique identifier (the metadata, col. 5, lines 24-27, describes the object), c) a third field functioning to identify how the object associated with the unique identifier in the first data field relates to other objects based upon the data in the second data field (the metadata identifies the object, and relates it to the other objects in the DAG, see col. 6, lines 44-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 7-9 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sweeney, further in view of Iwata et al. (USPN 5,335,320—filing date 101/15/1991), hereinafter Iwata, further in view of Rogowitz et al. (USPN 5,874,955—filing date 3/12/1996), hereinafter Rogowitz.

19. Regarding independent claim 7, Sweeney discloses receiving an object having an associated unique identifier, metadata, and history graph information (see col. 5, lines 10-30, the invention manipulates user objects). Sweeney also discloses modifying the object (see col. 5, lines 30-35). Sweeney fails to disclose assigning a new unique identifier to the object; and updating the metadata and history graph of the object to include a node

corresponding to the new unique identifier and a vector describing, via the metadata, the modification performed to arrive at the object corresponding to the new unique identifier. However, Iwata, in col. 8, lines 55-67 sets a new unique identifier for a GUI object in order to help manage the identity of the object. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate changing the identifier in Sweeney in the manner of Iwata in order to help manage the identity of objects. Furthermore, Rogowitz, in lines col. 20, lines 55-65 describes updating the metadata and history graph of the object to include a node corresponding to the new unique identifier and a vector describing, via the metadata, the modification performed to arrive at the object corresponding to the new unique identifier in order to track changes in the metadata. It would have been obvious to one of ordinary skill in the art at the time of the invention to include a node and a vector in the manner of Rogowitz in order to track changes in the metadata.

20. **Regarding dependent claim 8**, Sweeney discloses storing associated unique identifier, the new unique identifier, the metadata and the history graph, in col. 5, lines 10-30.
21. **Regarding dependent claim 9**, Sweeney discloses tracking the history of the object via the associated unique identifier, the new unique identifier, the metadata, and the history graph in formation related to the object (in col. 6, lines 45-65, the patent discloses how the DAG is used to track the history of the user object).
22. **Regarding independent claim 22**, it is a computer-readable medium containing instructions for performing the steps of claim 7 and is rejected under similar rationale.

23. **Regarding dependent claim 23**, it is a computer-readable medium containing instructions for performing the steps of claim 8 and is rejected under similar rationale.
24. **Regarding dependent claim 24**, it is a computer-readable medium containing instructions for performing the steps of claim 9 and is rejected under similar rationale.
25. **Claims 10-13 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sweeney, further in view of Iwata.**
26. **Regarding independent claim 10**, Sweeney discloses a method for synchronizing multiple versions of an object (Abstract, lines 4-5, Sweeney uses a DAG to access stored procedures in a version control setup), comprising: receiving an object; (col. 5, lines 10-25, the DAG manages objects); deciding whether the object has an associated unique identifier and history graph (col. 5, lines 20-30, the DAG manages objects and their properties), and creating a history graph for the first object having a node representing the unique identifier (the invention creates DAGs and manages them, as disclosed in col. 6, lines 44-65). Sweeney fails to disclose assigning the object a unique identifier when it is determined that the object does not have an associated unique identifier. However, Iwata, in col. 8, lines 55-67 sets a new unique identifier for a GUI object in order to help manage the identity of the object. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate changing the identifier in Sweeney in the manner of Iwata in order to help manage the identity of objects.
27. **Regarding dependent claim 11**, Sweeney discloses adding metadata to the object to describe the object (in col. 5, lines 24-27, objects are described by metadata).

28. **Regarding dependent claim 12**, it modifies claim 11 by adding the content of claim 7 to it, and may be rejected under similar rationale.
29. **Regarding dependent claim 13**, it modifies claim 12 by adding the content of claim 8 to it, and may be rejected under similar rationale.
30. **Regarding independent claim 25**, it is a computer-readable medium containing instructions for performing the steps of claim 10 and is rejected under similar rationale.
31. **Regarding dependent claim 26**, it is a computer-readable medium containing instructions for performing the steps of claim 11 and is rejected under similar rationale.
32. **Regarding dependent claim 27**, it is a computer-readable medium containing instructions for performing the steps of claim 12 and is rejected under similar rationale.
33. **Regarding dependent claim 28**, it is a computer-readable medium containing instructions for performing the steps of claim 13 and is rejected under similar rationale.
34. **Claims 14 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sweeney, further in view of Shmueli et al. (USPN 6,044,375—filing date 4/30/1998), hereinafter Shmueli.**
35. **Regarding independent claim 14**, Sweeney discloses a method for synchronizing multiple versions of an object (Abstract, lines 4-5, Sweeney uses a DAG to access stored procedures in a version control setup), comprising: receiving objects; (col. 5, lines 10-25, the DAG manages objects); assigning unique identifiers to each of the objects (col. 5, lines 24-27, the objects have metadata which identifies them); creating a history graph for each of the objects having nodes representing unique identifiers and vectors describing the relationship between the objects associated with corresponding unique identifiers of

the nodes in the history graph, respectively; (the invention creates DAGs and manages them, as disclosed in col. 6, lines 44-65); Sweeney discloses adding metadata to the object to describe the object, wherein the metadata describes any modifications made to the respective objects (in col. 5, lines 24-27, objects are described by metadata), Sweeney discloses storing associated unique identifier, the new unique identifier, the metadata and the history graph, in col. 5, lines 10-30, and deciding whether the object has an associated unique identifier and history graph (col. 5, lines 20-30, the DAG manages objects and their properties). Sweeney fails to disclose comparing the unique identifier, and the the at least one of the history graph and the metadata of the new object with the unique identifiers, the history graphs and the metadata for the stored objects; and determining whether the new object is related to at least one of the stored objects based upon the comparison. However, Shmueli, in col. 9, lines 24-42 determines whether objects are related based upon metadata in order to improve confidence factors about judgments about the objects. It would have been obvious to one of ordinary skill in the art at the time of the invention to analyze relationships between objects based on metadata in the manner of Shmueli in order to to improve confidence factors about judgments about the objects.

36. **Regarding independent claim 29**, it is a computer-readable medium containing instructions for performing the steps of claim 14 and is rejected under similar rationale.
37. **Claims 15 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sweeney, further in view of Shmueli , further in view of Kishi et al. (USPN 5,502,733—filing date 3/2/1994), hereinafter Kishi.**

38. Regarding dependent claim 15, Sweeney and Shmueli fail to disclose determining whether to store the new object when it is determined that the new object is related to at least one of the store objects. However, in Kishi, col. 5, lines 29-67, Kishi discloses determining whether to store the new object when it is determined that the new object is related to at least one of the store objects, in order to selectively respond to characteristics of the object. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Kishi's selective storing into the inventions of Sweeney and Shmueli in order to selectively respond to characteristics of the object.

39. Regarding dependent claim 30, it is a computer-readable medium containing instructions for performing the steps of claim 15 and is rejected under similar rationale.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 5,832,483 (filing date 12/13/1996)—Barker

USPN 5,758,340 (filing date 1/1/10/1997)—Nail

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan D. Schlaifer whose telephone number is 703-305-9777. The examiner can normally be reached on 8:30-5:00, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on 703-308-5186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JS



**STEPHEN S. HONG
PRIMARY EXAMINER**